Application No.	:	10/602,287	Confirmation No.	:	1163
Applicant	:	Romelia H. Flores			
Filed	:	June 24, 2003			
TC/A.U.	:	2614			
Examiner	:	Addy, Thjuan Knowlin			
Docket No.	:	BOC9-2003-0013 (383)			

PETITION TO EXPUNGE INFORMATION
UNINTENTIONALLY SUBMITTED IN APPLICATION

MAIL STOP PETITION
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.59(b), Applicants submit this petition to expunge information unintentionally submitted in the pending Application. In particular, Applicants respectfully request that the following document submitted in connection with Applicants' response to the Final Office Action dated November 13, 2007, be expunged in its entirety:

Disclosure BOC8-2002-0105, consisting of 9 pages.

In support of this petition, Applicants, through their undersigned representatives, affirm that:

1. The information was unintentionally submitted and that failure to obtain its return would cause irreparable harm to the party in interest on whose behalf the information was submitted.
2. The information has not otherwise been made public.

3. Applicants are committed to retaining the information for the period of any patent with regard to which such information was submitted.

A redacted version of **Disclosure BOC8-2002-0105** is submitted herewith. The Office is expressly authorized to charge the petition fee set forth in 37 CFR 1.17(h) to Deposit Account 50-0951.

Respectfully submitted,

Date: January 15, 2008

/Richard A. Hinson/
Gregory A. Nelson, Registration No. 30,577
Richard A. Hinson, Registration No. 47,652
AKERMAN SENTERFITT
Customer No. 40987
Post Office Box 3188
West Palm Beach, FL 33402-3188
Telephone: (561) 653-5000

Disclosure BOC8-2002-0105

Prepared for and/or by an IBM Attorney - IBM Confidential

Created By: Romelia Flores **Created On:** 10/03/2002 01:31:14 PM
Last Modified By: Romelia Flores **Last Modified On:** 10/08/2002 11:42:13 AM

Required fields are marked with the asterisk (*) and must be filled in to complete the form.

*Title of disclosure (in English)

System for Recognition of CSR Interaction Effectiveness

Summary

Status	Submitted
Final Deadline	
Final Deadline Reason	
Processing Location	BOC
Functional Area	[redacted]
Attorney/ Patent Professional	Richard Tomlin/Boca Raton/IBM
IDT Team	[redacted]
Submitted Date	10/03/2002 11:44:29 AM MDT
*Owning Division	[redacted]
Incentive Program	
Lab	
[redacted]	[redacted]
[redacted]	[redacted]

Inventors with a Blue Pages entry

Inventors: Romelia Flores/Dallas/IBM, Biao Hao/Dallas/IBM

Inventor Name	Inventor Serial	Div/Dept	Inventor Phone	Manager Name
> Flores, Romelia H.	[redacted]	[redacted]	[redacted]	[redacted]
Hao, Biao	[redacted]	[redacted]	[redacted]	[redacted]

> denotes primary contact

Inventors without a Blue Pages entry

IDT Selection

Attorney/Patent Professional: Richard Tomlin/Boca Raton/IBM

IDT [redacted]

*Main Idea

1. Describe your invention, stating the problem solved (if appropriate), and indicating the advantages of using the invention.

Many corporations are investing heavily on Customer Relationship Management (CRM) in order to recognize the value their customer's bring and ensure they are handled appropriately regardless of the interaction mechanism (phone, e-mail, internet, etc.) chosen by a customer. How smoothly a corporation handles a customer can provide a differentiating factor and increase customer loyalty and retention. Most corporations have implemented a traditional call center environment to enable a Customer Service Representative (CSR) to interact with customers to provide assistance and services. As technology has evolved, new collaboration mechanisms such as e-mail, chat, and Voice over IP (VoIP) have extended the capability of a CSR to interact with a customer via the Internet channel. A customer can request assistance, information, or services via the Internet and can typically specify whether they would like for a CSR to interact with them via one of the following interaction mechanisms:

- Requesting a phone conversation with a CSR or that a CSR conduct a return call at a particular time
- Requesting information be sent via e-mail
- Requesting an immediate chat session with a CSR
- Requesting assistance in filling out information on the web (known as co-browsing or joint form filing)
- Requesting a VoIP interaction with a CSR via the customer's computer system (microphone and speakers)

Many CRM Systems and Network Equipment Providers (NEPs) have evolved their products to integrate these multiple interaction mechanisms. State of the art systems are starting to enable the "Intelligent Routing" of customer requests to CSRs via all of these interaction mechanisms. The typical approach for implementing this intelligent routing is to create Routing Rules and CSR profiles. Routing Rules are simple logic that are used to route a request based on rules that are defined in the system such as current availability (whether a CSR is signed in to the system) or the physical location of a CSR. Routing Rules rely on data available within the NEP/CRM databases. CSR profiles can further identify when a CSR is available to interact with a customer via a particular interaction mechanism. The following diagram depicts three CSR profiles that have been set up to reflect a CSR's preference of interaction mechanism with a customer.

CSR	Availability	Skills	Interaction Mechanism
CSR A	9:00 a.m. – 11:30 a.m.	Prod A	Phone
CSR A	12:30 a.m. – 4:30 p.m.	Prod A	Phone
CSR B	9:00 a.m. – 11:30 a.m.	Prod B	Electronic (e-Mail, Chat)
CSR B	12:30 a.m. – 4:30 p.m.	Prod B	Electronic (e-Mail, Chat)
CSR C	9:00 a.m. – 11:30 a.m.	Prod A, B	Phone, Electronic (e-Mail, Chat, Co-Browsing, VoIP)
CSR C	12:30 a.m. – 4:30 p.m.	Prod A, B	Phone, Electronic (e-Mail, Chat, Co-Browsing, VoIP)

In this example CSR A has effective verbal skills, but is not an accurate typist, therefore this CSR's profile is setup to ensure that customer requests for phone interactions be sent to this CSR. CSR B has fast typing skills and prefers to interact with customers via chat or e-mail, therefore this CSR's profile is set up to ensure that customer requests for e-mail or chat interactions be sent to this CSR. CSR C has effective verbal and typing skills; therefore this CSR's profile is setup to handle requests of any type.

The information stored in the CSR profile is typically set up by determining a CSR's skills base and creating a CSR profile. The determining of the CSR's skills base can be subjective or can have a "test" associated with it to determine a particular skill (typing exam determining words per minute, Internet exam determining skills with chat, e-Mail, Co-Browsing or VoIP capabilities, exams regarding specific products). The profile information along with Routing Rules such as CSR availability information or physical location determine the "Intelligent Routing" that needs to be performed to ensure that the appropriate CSR receives a work item to handle a particular customer call/interaction. Most CSR profiles are typically set up when a new CSR joins the call center and are typically

updated by the CSR (or CSR Manager) once a year. The update and maintenance of this information becomes critical for the appropriate "Intelligent Routing" of requests through the system.

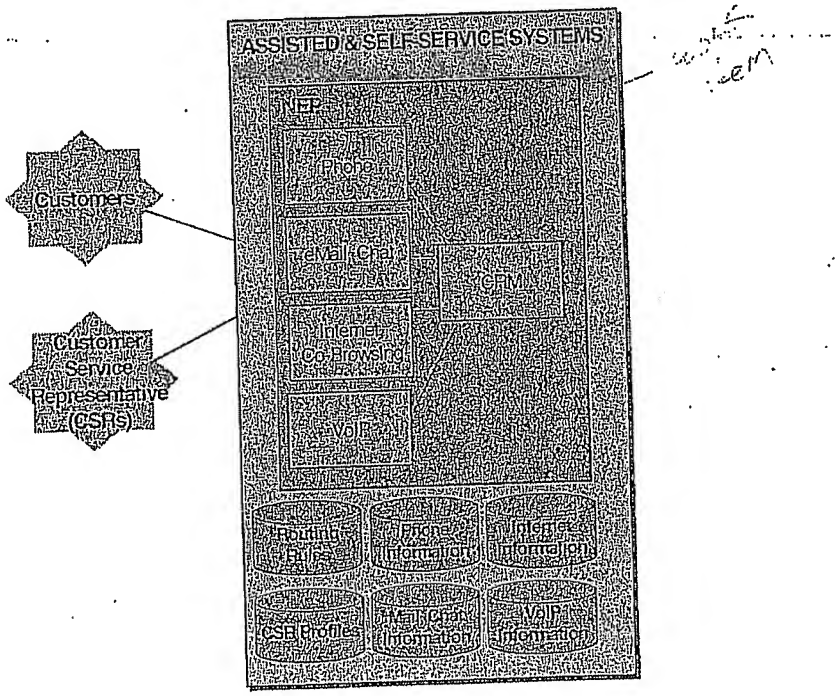
The invention proposed by our team creates a system that enhances existing NEP and CRM systems by utilizing data mining and analytics technology on a data warehouse. The data warehouse contains information provided by multiple (all) mechanisms that are available for a customer to interact with. The invention provides a system to determine the success that a CSR has with customers utilizing any/all interaction mechanism. For example the system can recognize if a customer purchases a product or is satisfied with services provided by the CSR by having the system recognize and correlate a customer's purchase or satisfaction with phone calls, e-mails, chat, or VoIP interactions. A direct user feedback mechanism can also be created to have the customer provide information on their interaction experience with a CSR. Our invention embraces technologies which enable traditional customer interaction mechanisms (mail or fax) to also be taken into account when examining CSR effectiveness. Most CRM and NEP vendors provide the ability to have the system recognize if a phone conversation is not being handled appropriately by a CSR and to enable a manager to become aware of the situation. Our system provides the ability to have the system recognize any of the interaction mechanisms with the appropriate management notification along with an automated updating of profile information to intelligently maintain the system. The advantages of correlating customer interactions (purchases/satisfaction) and CSR interaction mechanisms in an automated fashion are:

- Providing the best possible experience to customers. By having up to date information for "Intelligent Routing" a customer can be routed to a CSR that has the appropriate skills to handle a particular interaction mechanism. The system enables the "Intelligent Routing" to utilize non-subjective, historical data during the processing of Routing rules.
- Verification of profile information so that "Intelligent Routing" is based on a CSR's success history with a particular interaction mechanism. The system can be set up to verify which CSR can handle customers via a particular interaction mechanism and modify profile information based on direct customer feedback or system correlation of customer purchases/satisfaction. The system can be flexible enough to automatically provide input to the "Intelligent Routing" provided by NEPs or CRM vendors or can have a user interface to enable a manager to use this information to update a CSR profile in the NEP or CRM vendor products.
- Providing a "weight scheme" which can be utilized by NEPs or CRM vendors for the "Intelligent Routing" of customer interactions to CSRs. The "weight scheme" can be used to ensure that an interaction is delivered to a CSR which has the best history of dealing with a customer via a particular interaction mechanism as well as to a CSR which has a previous history with a particular customer. This information can be coupled with typical "Intelligent Routing" criteria such as CSR availability, skills, preferred customer channel and location that is typically provided by NEPs or CRM vendor technology.
- Embracing all interaction mechanisms (mail, fax, e-mail, internet, etc.) to collect as much information and customer satisfaction detail as possible. By taking into account all forms of interaction mechanisms, the most accurate understanding of customer interactions are enabled by the system.

2. How does the invention solve the problem or achieve an advantage,(a description of "the invention", including figures inline as appropriate)?

State of the Art NEPs and CRM vendors in the industry provide support for "Intelligent Routing" of workitems to CSRs which support a variety of interaction mechanisms. The following diagram depicts such systems.

State of the Art NEP & CRM Vendor System



The diagram shows how a customer can utilize several interaction mechanisms (phone, Internet, e-mail) to request assistance. The request for assistance is intelligently routed and generates a workitem in the CRM system that is received by a CSR. The CSR can assist a customer on a workitem via the interaction mechanism selected by the customer. Typically if a customer is making a request via a phone call into the CRM system, the CRM system will generate a phone interaction with the customer. However, if a customer is making a request via the Internet into the CRM system, the customer can specify the type of interaction mechanism to be used to handle their request and the CRM system will generate an interaction with the customer via the specified interaction mechanism.

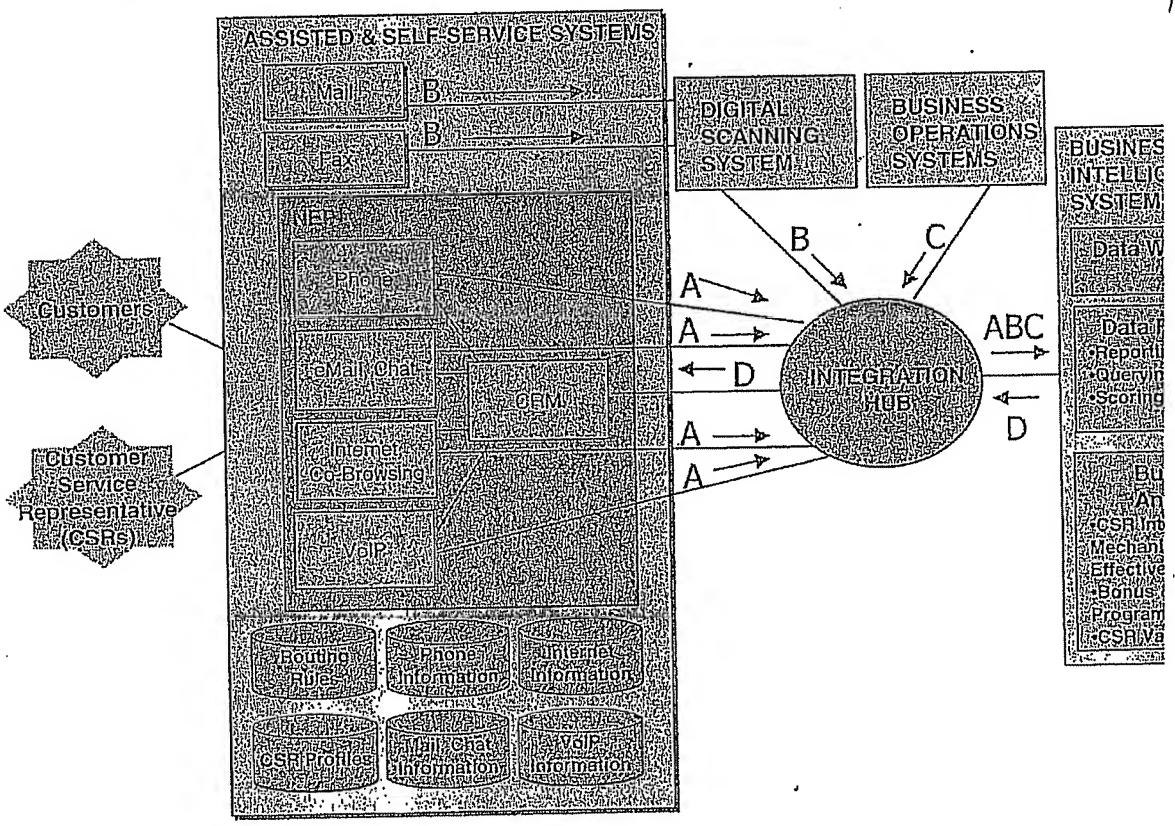
The typical approach for implementing this intelligent routing is to create Routing Rules and CSR profiles. Routing Rules are simple logic that is used to route a request based on rules that are defined in the system such as current availability (whether a CSR is signed in to the system) or the physical location of a CSR. CSR profiles can further identify when a CSR is available to interact with a customer via a particular interaction mechanism. As shown in the diagram, these Routing Rules and CSR Profiles are typically stored in separate databases. Also shown in the diagram is the fact that each Interaction Mechanism typically stores their pertinent information in their own separate databases (silos) since these Interaction Mechanisms are typcically implemented by different vendors. For example, Lotus Servers or MicroSoft Exchange Servers for e-mail and chat systems; or NEPs or CRM Vendors for co-browsing or VoIP systems.

In some cases, some of the vendor solutions implement Business Intelligence functions such as data warehousing, data reporting and business analytics. However, the Business Intelligence typically deals only with the data that is generated by that vendor's solution. For example, Siebel's CRM Applications have Business Intelligence to analyze

customer trends or CSR effectiveness, but typically the business intelligence is not applied to CRM Effectiveness across multiple interaction mechanisms nor does this business intelligence apply to data from multiple systems (databases). Furthermore the business intelligence information is not shared with the "Intelligent Routing" typically implemented by a NEP.

The following diagram depicts the System for Recognition of CSR Interaction Effectiveness.

System for Recognition of CSR Interaction Effectiv



The system supports the same level of technology that existed before in terms of how a customer can utilize several interaction mechanisms (phone, Internet, e-mail) to request assistance and how a CSR can provide assistance to a customer via multiple interaction mechanisms. Additional components of the CSR Interaction Effectiveness System are:

- Assisted and Self-Service Systems that enable electronic and voice forms (phone, internet, etc.) of interaction mechanisms with a customer and send information to the Business Intelligence Systems. The separate databases utilized by each interaction mechanism remain, as they existed in the original system. The data flow from the Assisted and Self-Service Systems to the Business Intelligence Systems is depicted in the diagram as A.
- A Digital Scanning System that is utilized by interaction mechanisms that require scanning of information in order to provide this data to the Business Intelligence Systems. The data flow from the appropriate Assisted and

Self-Service Systems (fax, mail) that utilize digital scanning to the Business Intelligence Systems is depicted in the diagram as B.

- Business Operations systems that support business operations as well as sending information to the Business Intelligence Systems. The data flow from the Business Operations Systems to the Business Intelligence Systems is depicted in the diagram as C.
- a Business Intelligence Systems which consists of:
  a. a Data Warehouse to store information sent from the multiple interaction mechanisms as well as business operations systems
  b. a Data Reporting system which provide the reporting, querying and scoring of information contained in the data warehouse
  c. a Business Analytics system to analyze the data and determine CSR Interaction Mechanism Effectiveness, Bonus & Retention Programs and CSR Value
  The data flow from the Business Intelligence Systems back to the Intelligent Routing Rules in the CRM System is depicted in the diagram as D.
- an Integration Hub which provides the middleware infrastructure utilized to enable the multiple interaction mechanisms and business operations systems to send information to the Business Intelligence Systems and the Business Intelligence Systems to send data back to the Intelligent Routing Rules in the CRM System (as explained in last item).

Multiple kinds of analysis can be performed to measure CSR Interaction Effectiveness such as:

- how many interactions a CSR performs utilizing a particular interaction mechanism
- which interaction mechanism enables a particular CSR to have higher productivity
- which interaction mechanism enables a CSR to have a higher success rate
- how successful is a CSR interaction on a particular interaction mechanism
- what the duration of CSR assistance on a particular interaction mechanism is
- what interaction mechanisms enable more frequent customer purchases
- what interaction mechanisms enable more expensive customer purchases
- what interaction mechanisms provide positive customer experiences

Since all of the systems are flowing data into the data warehouse as interactions with customers are occurring, the system provides a mechanism to validate and update CSR profile information based on current customer interactions, therefore enabling the determination of a CSR's effectiveness with customers utilizing non-subjective data. Analysis data produced by the Business Intelligence System of CSR Interaction Effectiveness can then be sent to the CRM system for use in the Intelligent Routing rules to enable effective routing of interactions to CSRs. The major advantages that our system provides are that the Routing Rules used to Intelligently Route interactions to a CSR now utilize data provided by the business intelligence system in determining CSR Interaction Mechanism Effectiveness. Since the Business Intelligence System receives data from the multiple interaction mechanisms, the NEP, CRM vendor and Business Operations systems, CSR effectiveness across the multitude of interaction mechanisms and business operations can be analyzed. The analysis can include written and verbal communication information obtained from the multiple interaction mechanisms sent to the data warehouse. This analysis can provide information regarding the appropriateness of chat, e-mail, and/or voice communications. Analysis as to whether a customer is satisfied with the interaction being conducted by the CSR can also be performed. This type of analysis data along with customer survey input data can be used to measure CSR Interaction Mechanism Effectiveness.

Overall the System for recognition of CSR Interaction Effectiveness can be utilized to enable the best possible service to customers and improve customer satisfaction and loyalty.

3. If the same advantage or problem has been identified by others (inside/outside IBM), how have those others solved it and does your solution differ and why is it better?

We are not aware of another solution to the problem identified.

4. If the invention is implemented in a product or prototype, include technical details, purpose, disclosure

details to others and the date of that implementation.
. This invention is not implemented in a product or prototype.

***Critical Questions (Questions 1-9 must be answered in English)**

***Question 1**

***Question 2**

Yes
No

Yes
No

***Question 3**

Yes
No

Yes
No

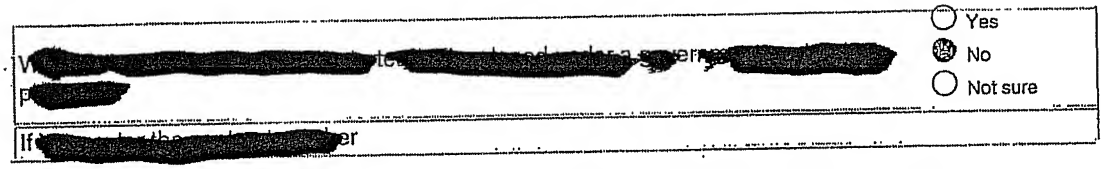
***Question 4**

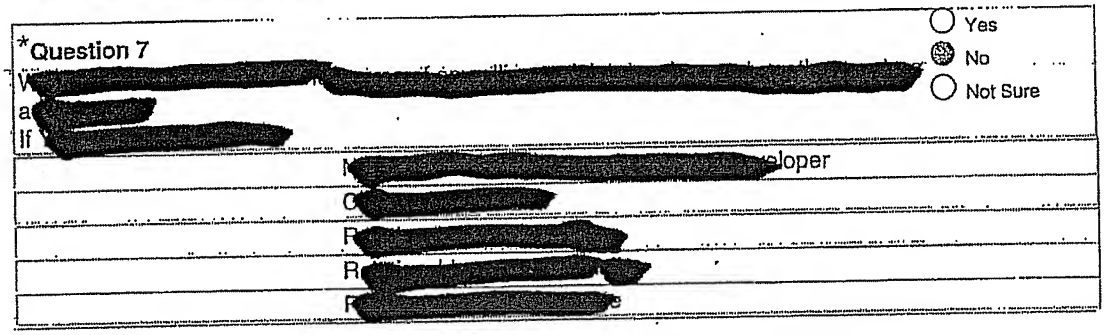
Yes
No

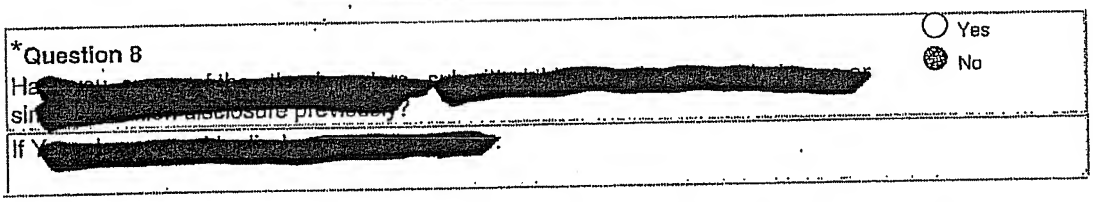
***Question 5**

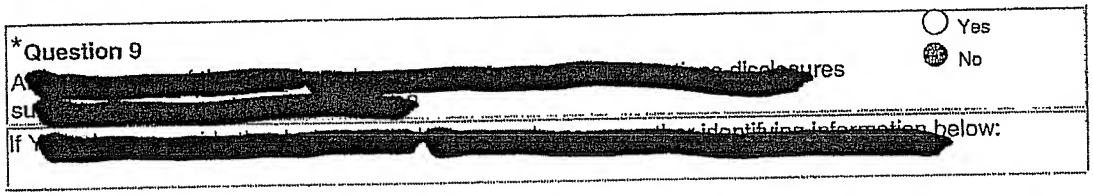
Yes
No

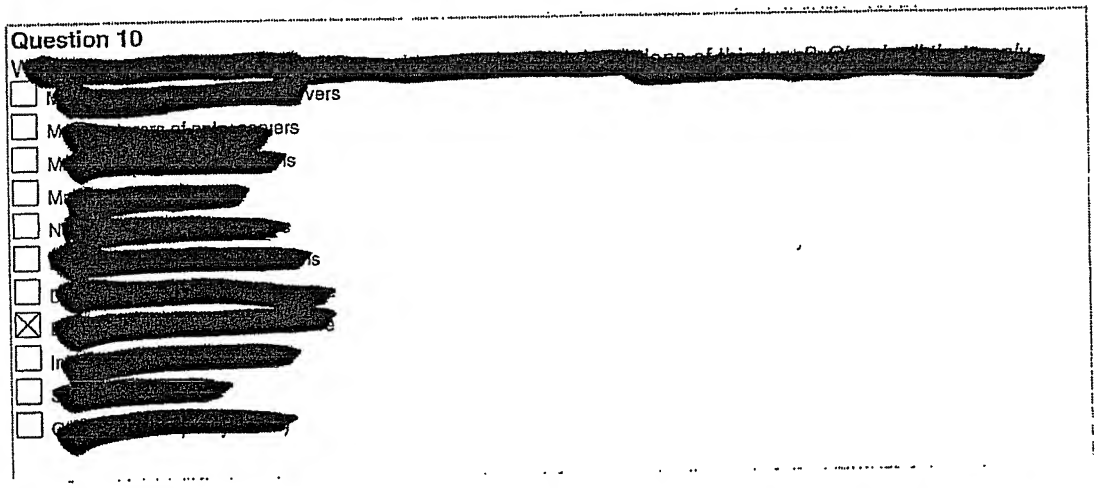
***Question 6**

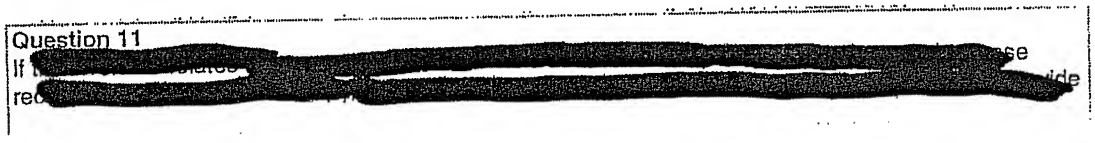

Yes
No
Not sure


*Question 7
Yes
No
Not Sure


*Question 8
Yes
No


*Question 9
Yes
No


Question 10


Question 11

a good evaluation of your invention:

[redacted]

Post Disclosure Text & Drawings

(Form Revised 12/17/97)